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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,031	01/30/2002	Toshihiro Takagi	3064IT/50891	7279

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Crowell & Moring, L.L.P.
P.O. Box 14300
Washington, DC 20044-4300

EXAMINER	
RAMAN, USHA	
ART UNIT	PAPER NUMBER
2623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/059,031	TAKAGI ET AL.	
	Examiner	Art Unit	
	Usha Raman	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed December 28th 2006 have been fully considered but they are not persuasive.

Applicant's arguments (see page 10) stating that, "McDermott does not disclose that when channel corresponding to the channel changing instruction is not stored in the memory, a predetermined sub-channel in a same channel as a desired channel is selected or a predetermined sub-channel in a same physical channel as the desired channel is selected" have been noted. The examiner respectfully disagrees. The claim language recites, "selecting a predetermined sub-channel in a same channel as a desired channel ***or*** a predetermined sub-channel in a same physical channel as the desired channel when the channel corresponding to the channel changing instruction is not stored in the memory". Neither claim language nor grammar limits the scope of the claim to 'when channel corresponding to the channel changing instruction is not stored in the memory, a predetermined sub-channel in a same channel as a desired channel is selected or a predetermined sub-channel in a same physical channel as the desired channel is selected '. The claim language has been recited in the alternative form of, "selecting *a pre-determined...same channel...*or *a pre-determined....sub-channel...*", wherein McDermott anticipates the first alternative form of selecting a predetermined sub-channel in a same channel as a desired channel.

Applicant's arguments (see page 12) stating that, "McDermott does not disclose obtaining the latest VCT or the selection of the sub-channel in the manner

recited in claim 1, when the control unit could not find the desired channel" have been noted. The examiner respectfully disagrees. McDermott teaches the step of searching for the desired virtual channel in more than one physical channels when TSID and CTSID do not match (see column 6, lines 50-63). Furthermore, each time (after the first time) a new physical channel has to be searched, the search for the desired channel in the previous physical channel failed and a new VCT is downloaded from the new physical channel, which may not contain the virtual channel block of the virtual channel (see column 6, lines 57-67). Consider the example where the user requests a channel 12(major)-2(minor). Using the flowchart of figure 6, the first mapping table is used to map the major channel to a physical channel. Now note that a major channel number can have one or more physical channel numbers (see column 1, lines 54-56). Keeping this in mind, the first physical channel of the major channel 12 is tuned to (step 618) and VCT from that channel is obtained. If the VCT in this channel has a virtual channel block for the desired channel (step 626), so the CTSID from the VCT is obtained. Now the CTSID is compared to the TTSID (step 638). If the desired minor channel is not in this physical channel, it goes to another physical channel at step 646, which iterates the loop again to step 618. This time, it obtains a VCT again. If the VCT in this channel does not have a virtual channel block for the desired channel (step 626), it displays a "Service Unavailable" message at step 630. Now note that, in the first iteration of the loop, the system was "unable" to tune to the desired channel (because it was not in the first physical channel), and then downloaded the VCT

from the new physical channel in a second iteration of the loop. McDermott also discloses the step of displaying a "SERVICE UNAVAILABLE" message when the desired channel is no longer available and therefore displaying such a message on an invalid sub-channel. Mears is further relied upon for the teaching of selecting the smallest sub-channel of the same channel when an invalid sub-channel has been entered.

As a result, the rejection is maintained.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the parenthetical reference in page 3 remains indiscernible as it remains unclear if it is intended to be exemplary or further limit the "changing instruction". The claim written to recite --the changing instruction of a desired channel-- is suggested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by McDermott (US Pat. 6,775,843).

In regards to claim 5, McDermott discloses a channel selection method comprising the step of:

'Upon reception of the channel changing instruction (see column 3, lines 66-column 4 line 6), determining whether a channel corresponding to the channel changing instruction is stored in a memory (see column 5, lines 7-35), and selecting a predetermined sub-channel in a same channel as a desired channel (see column 6, lines 21-61).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (US Pat. 6,775,843) in view of Mears et al. (US Pat. 6,707,508).

With regards to claim 1, McDermott discloses a channel selection device (see column 2, lines 18-21) used in a digital/analog broadcasting receiver (see column 3 lines 44-46) comprising:

A receiver (110) for receiving an encoded digital/analog broadcasting signal originated from a broadcasting station (see column 3, lines 13-24, 29-40, and 38-65);

A digital/analog decoder (115) for decoding the digital/analog broadcasting signal received from the receiver and then outputting the signal to a display (column 3, lines 41-57);

A memory (155) for storing a channel map (185), channel information contained in the broadcasting signal decoded by the digital decoder (column 4, lines 40-54);

A control unit (150) for controlling the sections of the receiver and an input device for inputting user's instructions for channel selection to the control unit (column 4, lines 21-29),

An input device for inputting a user's instruction for channel selection to the control unit (see column 3, lines 66-column 4, line 6)

Wherein the device receives a digital broadcast and an analog broadcast which are originated through different physical channels, the digital broadcasting signal has one or a plurality of sub-channels for originating contents there through per one physical channel, and also has a VCT containing virtual channel information that provides sub channels with a correlation with an analog broadcasting physical channel (see column 5, lines 1-35), and

The control unit (150) controls the device such that the receiver receives the broadcasting signal of a selected channel upon reception of the channel selection instruction from the input device (see column 3, lines 66-column 4, line 6) and then the digital decoder (115) decodes the received broadcasting signal (see column 3, lines 58-65), in order to obtain the channel information contained in the decoded

broadcasting signal and then store the channel information in the memory (see column 5, lines 7-35),

Wherein the control unit upon reception of the channel changing instruction from the input device (610), tries channel selection based on the channel information stored in the memory (see column 6, lines 21-61).

Wherein the control unit upon reception of the channel changing instruction from the input device (610), tries to select the channel by referencing the VCT thereof when the control unit could find channel information of a channel related to the changing instruction (desired channel) in the memory, and as a result of the trial selects the channel when the desired channel was found (see column 6, lines 21-50).

McDermott further discloses the step of tuning to *a* physical channel of the major channel first, obtaining the VCT from the physical channel, and checking to see if the virtual channel is there in the VCT and then checking if requested minor channel is in the current physical channel (CTSID = TTSID?). Therefore McDermott discloses the step of when a virtual channel was unable to be tuned to in the current physical channel (thereby failing to tune to the virtual channel in the first iteration of the loop of fig. 6), obtaining the latest VCT, to see if there exists an entry for the requested virtual channel. See column 6, lines 21-38. Additionally, the step of selecting a desired channel is based on locating the desired channel based on information stored in the memory (channel maps, downloaded VCT). See column 6, lines 21-25, and lines 29-31. The step of a successful selection of a desired channel

as well as a failure of selecting a desired channel are based on information stored in the memory because a user selection of a desired channel is correlated through various tables stored in the memory.

McDermott merely discloses displaying an "service unavailable" message when the virtual channel does not exist (and therefore fails to tune to the requested virtual channel) fails to disclose the step of selecting a channel in the VCT that has the smallest sub-channel number in the same main channel as the desired channel or such a channel that has the smallest sub-channel number in the same physical channel as the desired channel.

Mears discloses a system for processing channel entry, wherein when a control unit could not find the desired the desired (minor) channel and failed in the channel selection, to thereby select such a channel smallest sub-channel number in the same main channel as the desired channel (see column 6, lines 60-67). Mears therefore provides an easy, intuitive user-friendly method of channel selection by presenting a valid channel the user even when the requested channel is not available.

It would been obvious to one of ordinary skill in the art at the time of the invention to modify the system of McDermott in view of Mears by utilizing Mears' teachings of tuning to the smallest sub-channel number in the main channel as the desired channel, when the requested virtual channel could not be tuned to. The motivation for the combination is to provide the user with a user-friendly channel selection device, that provides a user with a valid sub-channel of the major channel

even the requested virtual channel is unavailable, thereby alleviating the user of the burden of knowing types of channel being used for a particular programming.

With regards to claim 2, all the limitations of claim 2 are anticipated by the scope of claim 1 and therefore is analyzed as above.

With regards to claim 4, the modified system teaches a channel selection device for receiving a digital broadcast according to ATSC standard (see McDermott, column 1, lines 19-26, column 3, lines 12-24, see Mears: column 3, lines 28-32) and analog broadcasting according to NTSC standard (see Mears: column 4, lines 62-65).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott (US Pat. 6,775,843) in view of Eyer (US Pat. 6,483,547).

With regards to claim 6, McDermott is silent about the step of obtaining an updated channel table, when the predetermined sub-channel is selected based on the updated channel table.

Eyer discloses the step of a channel selection device entering a "learning" mode at the request of the user, wherein the learning mode updates all the active channels. See column 7, lines 24-30.

It would have been obvious to one for ordinary skill in the art to modify the system of McDermott in view of Eyer by allowing the user to enter a "learning" mode when a requested channel is stored in the memory (and therefore not found), wherein the learning mode updates the table with all active channels. The motivation is to provide the user with the most up to date channel availability.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (571) 272-7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UR

SCOTT E. BELIVEAU
PRIMARY PATENT EXAMINER